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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/619,501	07/16/2003	Young-Suck Kim	P-0550	7505
34610	7590	02/27/2006	EXAMINER	
FLESHNER & KIM, LLP P.O. BOX 221200 CHANTILLY, VA 20153			DU, THUAN N	
			ART UNIT	PAPER NUMBER
			2116	

DATE MAILED: 02/27/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/619,501	<b>Applicant(s)</b> KIM, YOUNG-SUCK	
	<b>Examiner</b> Thuan N. Du	<b>Art Unit</b> 2116	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 16 July 2003.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-27 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-27 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>7/16/03</u> . | 6) <input type="checkbox"/> Other: _____  |

### DETAILED ACTION

1. Claims 1-27 are presented for examination.

#### *Claim Rejections - 35 USC § 103*

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tetreault et al. [Tetreault] (U.S. Patent No. 6,813,721) and Wrobel "MPC8xx SDRAM Interface" – 11/2001 [Wrobel].

4. Regarding claim 1, Tetreault teaches a clock-synchronizing apparatus comprising:

a first device (module 110) operated according to a first clock (reference clock 140) and generating control signals at a speed of a second clock (local clock 180) [col. 2, line 65 to col. 3, line 3];

a second device (module 121) operated by being synchronized with the second clock according to the control signals [col. 3, lines 6-10]; and

a clock driver (173) generating the second clock by multiplying the first clock by predetermined even times [col. 6, lines 35-37] and removing a phase delay between the second clock and the first clock [col. 3, lines 43-53].

Tetreault does not explicitly teach that the second device having an operation latency of one clock period of the first clock.

Wrobel teaches a system for transmitting data between a processor and a SDRAM, wherein Wrobel suggests that the appearance of data onto the bus could be designed to be delayed until the system (processor) is ready [p. 2, last paragraph]. Therefore, one of ordinary skill in the art would have recognized that the operation of the SDRAM could be delayed in view of the operation of the processor.

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the teachings of Tetreault to delay the operation of the second device view of the operation of the first device as suggested by Wrobel because it would increase the reliability of the system by outputting the data only when the system (processor) is ready to prevent data loss.

5. Regarding claims 2-3, Tetreault teaches that the second clock is generated by multiplying the first clock by a predetermined times. Therefore, one of ordinary skill in the art would have recognized that 2 could be used in order to double the first clock.

6. Regarding claim 4, Wrobel suggests that the appearance of data onto the bus could be designed to be delayed until the system (processor) is ready [p. 2, last paragraph]. Therefore, one of ordinary skill in the art would have recognized that the operation of the SDRAM could be delayed in view of the operation of the processor.

7. Regarding claim 5, Wrobel teaches that the first device comprises a microprocessor and the second device comprises a RAM [p. 16, Part VI].

8. Regarding claims 6-8, Wrobel teaches that the memory controller can be programmed by a user [p. 2, 2<sup>nd</sup> paragraph].

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9. Regarding claims 9-17, in addition to the rejection of claim 1 above, Wrobel further teaches that the control signals corresponding to a specific operation mode of the RAM [p. 2, last paragraph; p. 8, section 3.4].

10. Regarding claims 18-27, they do not teach or further define over the limitations recited in the rejected claims above. Therefore, claims 18-27 are also rejected as being unpatentable over Tetreault and Wrobel for the same reasons set forth in the rejected claims above.

***Conclusion***

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thuan N. Du whose telephone number is (571) 272-3673. The examiner can normally be reached on Monday-Friday: 9:30 AM - 6:00 PM, EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lynne H. Browne can be reached on (571) 272-3670.

Central TC telephone number is (571) 272-2100.

The fax number for the organization is (571) 273-8300.

TD  
February 16, 2006



**THUAN N. DU**  
**PRIMARY EXAMINER**